

**PATENT**

Atty Docket No.: 200308756-02  
App. Ser. No.: 10/840,221

**IN THE CLAIMS:**

*Please find a listing of the claims below, with the statuses of the claims shown in parentheses. This listing will replace all prior versions, and listings, of claims in the present application.*

1. (Currently Amended) A system for forming a drawing of a system having a plurality of components that are to be combined comprising:

a merchandise information provider terminal adapted to be responsive to component arrangement information used to arrange ~~draw~~ the components on the drawing, responsive to estimate information used to calculate prices of the components, and responsive to a drawing-functional component diagram used to draw the ~~drawings of the~~ components;

wherein the component arrangement information comprises coordinates of a component of the plurality of components, the size and scale of the components of the drawing, an image frame, and a dimensional line; and wherein said drawing-function component diagram comprises an arrangement of components, drawing of dimension lines, and arrangement of image frames in the drawing;

a component arrangement information and estimate information database for storing the component arrangement information and the estimate information adapted to be entered at said merchandise information provider terminal;

a component diagram database for storing the drawing-functional component diagram entered at said merchandise information provider terminal, wherein the component diagram database comprises a physically separate database from the component arrangement information and estimate information database;

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a database server for transmitting the component arrangement information and the estimate information stored in said component arrangement information and estimate information database; and

a Web and application server for receiving a request and a condition, which are used to ~~form a~~ draw the drawing, and for forming the drawing;

said Web and application server being arranged to: (a) receive component arrangement information corresponding to the received condition from said database server, and (b) ~~form~~ draw the drawing of the system in which the components are to be combined based on said received component arrangement information and the drawing-functional component diagram stored in said component diagram database.

2. (Currently Amended) A method of ~~forming a~~ drawing of a system in which a plurality of components are combined based on component diagram data ~~having drawings of the~~ respective components stored on a component diagram database, the method being performed with a computer having a volatile memory and a processor, the method comprising:

receiving component arrangement information, used to draw including an arrangement of the components on the drawing, from a component arrangement information and estimate information database, wherein the component diagram database comprises a physically separate database from the component arrangement information and estimate information database; wherein the component arrangement information comprises coordinates of a component of the plurality of components, the size and scale of the components of the drawing, an image frame, and a dimensional line, and wherein said

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component diagram data comprises an arrangement of components, drawing of dimension lines, and arrangement of image frames in the drawing;

generating, by using the processor, a drawing object information of the system as a bitmap object based on the received component arrangement information and the component diagram data;

generating, by using the processor, a bitmap object of the system; and

storing the bitmap object in the volatile memory.

3. (Original) The method of claim 2, further including transmitting the bitmap object stored in the volatile memory.

4. (Currently Amended) A method of ~~forming a drawing of a system as claimed in claim 3,~~ wherein: said step of transmitting said bitmap object includes transmitting said bitmap object by streaming.

5. (Canceled).

6. (Canceled).

7. (Currently Amended) A method of ~~forming a drawing of a system as claimed in claim 2,~~ further comprising:

in a the merchandise information provider terminal, receiving the component arrangement information and storing the component arrangement information in the

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component arrangement information and estimate information database, receiving drawing-functional component diagrams and storing the drawing-functional component diagrams in the component diagram database, and wherein the merchandise information provider terminal comprises a separate machine from the computer.

8. (Currently Amended) ~~A method of forming a drawing of a system as claimed in claim 2 wherein: the drawing information of said system~~ bit map object is a perspective view.

9. (Currently Amended) A method of forming a written estimate of a system in which a plurality of components are combined based on component diagram data ~~having drawings of the respective components~~ stored on a component diagram database and price data having price information of the respective components stored on a component arrangement information and estimate information database, the method being performed with ~~in~~ a computer having a volatile memory and a processor, comprising:

~~receiving component arrangement information including an arrangement of the components on~~ used to draw a drawing and price data from the component arrangement information and estimate information database, wherein the component diagram database comprises a physically separate database from the component arrangement information and estimate information database, wherein the component arrangement information comprises coordinates of a component of the plurality of components, the size and scale of the components of the drawing, an image frame, and a dimensional line, and wherein said drawing-function component diagram comprises an arrangement of components, drawing of dimension lines, and arrangement of image frames in the drawing;

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generating, by using the processor, a drawing object information of the system as a bitmap object based on the received component arrangement information and the component diagram data;

storing the bit map object in the volatile memory; and

generating, by using the processor, estimate information of the system based on said received component arrangement information and said price data.

10. (Currently Amended) The method according to claim 9, further comprising:

in a merchandise information provider terminal, receiving the component arrangement information and the generated estimate information and storing the component arrangement information and the generated estimate information in the component arrangement information and estimate information database, receiving drawing-functional component diagrams and storing the drawing-functional component diagrams in the component diagram database, and wherein the merchandise information provider terminal comprises a separate machine from the computer.

11. (Currently Amended) ~~A method of forming a written estimate of a system as claimed in claim 9,~~ further comprising:

storing the generated estimate information and an identification number that specifies said generated estimate information, whereby the written estimate can be retrieved.

12. (Currently Amended) A drawing of a system in which a plurality of components are combined, the drawing having been ~~formed~~ drawn, using ~~in~~ a computer having a volatile

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memory and a processor, based on component diagram data ~~having drawings of the respective components~~ stored on a component diagram database;

said system drawing being ~~formed~~ drawn by:

receiving component arrangement information, used to draw the system drawing, including an arrangement of the components on a drawing from a component arrangement information and estimate information database, wherein the component arrangement information and estimate information database comprises a physically separate database from the component diagram database, wherein the component arrangement information comprises coordinates of a component of the plurality of components, the size and scale of the components of the system drawing, an image frame, and a dimensional line, and wherein said component diagram data comprises an arrangement of components, drawing of dimension lines, and arrangement of image frames in the system drawing;

generating, by the processor, a drawing object information of the system as a bitmap object based on the received component arrangement information and the component drawing diagram data;

storing the bitmap object in the volatile memory; and

transmitting the bitmap object stored by the volatile memory.

13. (Currently Amended) A written estimate of a system in which a plurality of components are combined with each other, the system being drawn using ~~formed in~~ a computer having a volatile memory and a processor based on component diagram data ~~having drawings of the respective components~~ stored on a component diagram database and

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based on price data having price information of the respective components stored on a component arrangement information and estimate information database;

said written estimate being formed by:

receiving component arrangement information ~~including an arrangement of the components on a drawing~~ from the component arrangement information and estimate information database, wherein the component arrangement information comprises coordinates of a component of the plurality of components, the size and scale of the components of the drawing, an image frame, and a dimensional line, and wherein said component diagram data comprises an arrangement of components, drawing of dimension lines, and arrangement of image frames in the drawing;

generating, by using the processor, a drawing object information of the system as a bitmap object based on the received component arrangement information and the component drawing diagram data;

storing the bit map object;

generating, by using the processor, estimate information of the system based on said received component arrangement information and said price data;

transmitting the bitmap object stored in the volatile memory; and

transmitting the generated estimate information of said system.

14. (Currently Amended) A computer program product stored on a computer readable storage medium for enabling a computer, having a volatile memory and a processor, to form draw a drawing of a system in which a plurality of components are combined with each other based on component diagram data ~~having drawings of the respective components~~ stored on a

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component diagram database, the computer program product, when implemented, causing the computer to execute the steps of:

receiving component arrangement information ~~including an arrangement of the components on~~ used to draw the drawing from the component arrangement information and estimate information database, wherein the component diagram database comprises a physically separate database from the component arrangement information and estimate information database, wherein the component arrangement information comprises coordinates of a component of the plurality of components, the size and scale of the components of the drawing, an image frame, and a dimensional line, and wherein said component diagram data comprises an arrangement of components, drawing of dimension lines, and arrangement of image frames in the drawing;

producing, by the processor, a drawing object information of the system as a bitmap object based on the received component arrangement information and the component drawing data; and

storing the bit map object in the volatile memory.

15. (Currently Amended) The method according to claim 14, wherein the product stored on the computer readable storage medium causes the computer to perform the step of:

in a merchandise information provider terminal, receiving the component arrangement information and storing the component arrangement information in the component arrangement information and estimate information database;

receiving drawing-functional component diagrams; and



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storing the drawing-functional component diagrams in the component diagram database, and wherein the merchandise information provider terminal comprises a separate machine from the computer.

16. (Currently Amended) A computer readable storage medium on which is stored a data structure used to display, on a terminal apparatus, a written estimate of a system in which a plurality of components are combined based on (a) component diagram data used to draw a drawing of a configuration ~~having drawings of the respective components~~ stored on a component diagram database and (b) price data having price information of the respective components stored on a component arrangement information and estimate information database, the data structure being in a computer and comprising:

drawing information of the system which has been used to generate ~~generated as a~~ bitmap object based on (c) component arrangement information ~~for the arrangement of the components on the drawing~~ and (d) the component diagram data which has been stored on the component diagram database;

cost estimate information of the system which has been generated based on said component configuration ~~arrangement information~~ and said price data which has been stored on the component arrangement information and estimate information database; ~~database;~~

wherein the component arrangement information and estimate information database comprises a physically separate database from the component diagram database; and

wherein the component arrangement information comprises coordinates of a component of the plurality of components, the size and scale of the components of the drawing, an image frame, and a dimensional line, and wherein said component diagram data

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comprises an arrangement of components, drawing of dimension lines, and arrangement of image frames in the drawing.

17. (Currently amended). A computer readable storage medium on which is stored a data structure used to display, on a terminal apparatus, a written estimate of a system-in-which-a plurality of components are combined based on (a) component diagram data having drawings of the respective components stored on a component diagram database and (b) price data having price information of the respective components stored on a component arrangement information and estimate information database, the data structure being in a computer and comprising:

drawing information of the system including a bitmap object including comprising a component configuration based on component diagram data, price data, and component arrangement information, wherein a component diagram database stores (1) said component diagram data and wherein said component diagram data comprises (a) an arrangement of components, (b) a drawing of dimension lines, and (c) an arrangement of image frames; wherein a component arrangement information and estimate information database stores (2) said price data and (3) said component arrangement information; wherein said component arrangement information comprises (a) coordinates of a component of a drawing, (b) a size and scale of a component, (c) an image frame, and (d) a dimensional line; wherein said component diagram database comprises a physically separate database from said component arrangement information and estimate information database for the arrangement of the components on the drawing and the component diagram data stored on the component diagram database; and

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cost estimate information of the system including costs of said component arrangement configuration and said price data stored on the component arrangement information and estimate information database, wherein the component arrangement information and estimate information database comprises a physically separate database from the component diagram database.

18. (Currently amended) A method of forming a drawing of a system as claimed in claim 2, further comprising:

implementing a database server to transmit the component arrangement information from the component arrangement information and estimate information database to the computer, wherein the computer comprises a web and application server, and wherein the database server and the web and application server comprise different machines.

19. (Currently Amended) A method of forming a written estimate of a system as claimed in claim 9, further comprising:

implementing a database server to transmit the component arrangement information from the component arrangement information and estimate information database to the computer, wherein the computer comprises a web and application server, and wherein the database server and the web and application server comprise different machines.